

USSN 10/658,598

Amendment responsive to Office Action mailed on March 3, 2005

June 3, 2005

A-1955

Amendments to the Claims :

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims :

1. (Currently Amended) An economical method of making spin blanks greater than a predetermined size, comprising:
providing at least two pieces of material having abutting edges;
friction stir welding the two pieces together along the abutting edges to form a blank; and
spin forming the blank into a desired article, the spin forming step comprising clamping the blank, applying heat thereto, and rotating the blank while applying pressure to selected regions thereof using a tool.
2. (Original) The method as recited in Claim 1, wherein any number and size of material pieces are joined by friction stir welding to provide the required blank size.
3. (Original) The method as recited in Claim 1, wherein the material pieces are an aluminum alloy.
4. (Original) The method as recited in Claim 3, wherein the material pieces comprise sheet having a thickness of 0.030 inches (0.762 mm) or greater.
5. (Original) The method as recited in Claim 3, wherein the material pieces comprise plate having a thickness of 0.250 inches or greater to a maximum thickness that can be friction stir welded.

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6. (Currently Amended) The method as recited in Claim 1, wherein the blank is annealed after friction stir welding, prior to the spinning spin forming step.

7. (Original) The method as recited in Claim 1, wherein the material pieces are friction stir welded in any heat treat condition to a maximum size of available annealing ovens that will accommodate a circular blank.

8. (Currently Amended) The method as recited in Claim 7, wherein the blank is annealed after friction stir welding and prior to the spinning spin forming step.

9. (Currently Amended) The method as recited in Claim 1, wherein the material pieces are friction stir welded in the an annealed temper, to form said blank with a joint therein, and the spin forming step is performed blank spun with the joint in the as-welded condition.

10. (Canceled)

11. (Original) The method as recited in Claim 1, wherein said at least two pieces comprise plates, and said blank has a diameter greater than 209 inches.

12. (Original) The method as recited in Claim 1, wherein said at least two pieces comprise sheets, and said blank has a width greater than 139 inches.

13. (New) An economical method of making spin blanks greater than a predetermined size, comprising:

providing at least two pieces of material having abutting edges;

friction stir welding the two pieces together along the abutting edges to form a blank;

annealing the blank; and

spin forming the blank into a desired article.

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14. (New) The method as recited in Claim 13, wherein the friction stir welding step is performed with the material in a fully heat treated condition.

15. (New) The method as recited in Claim 13, wherein the friction stir welding step is performed with the material in an as-rolled condition.

16. (New) An economical method of making spin blanks greater than a predetermined size, comprising:

providing at least two pieces of material having abutting edges, said material being in an annealed condition;

friction stir welding the two pieces together along the abutting edges to form a blank; and

spin forming the blank into a desired article.